

CONFIDENTIAL

CONFERENCE ON "YELLOW RAIN" SPONSORED BY  
THE PROGRAM IN SCIENCE, TECHNOLOGY, AND SOCIETY,  
MIT; THE INSTITUTE FOR FOREIGN POLICY ANALYSIS,  
AND THE AMERICAN ACADEMY OF ARTS AND SCIENCES

CAMBRIDGE, MASS., April 15-16, 1983

SUBJECT: A report by Gary Crocker, US State Department, on the findings and assessments on the US evidence on "Yellow Rain"

SUMMARY:

The conference was chaired by Professor Carl Kaysen from MIT and included US and foreign experts on chemistry, biology, botany, anthropology, toxicology, chemical warfare, biochemistry, medicine, agriculture, pathology, paleobiology and international law. A list of participants is attached. After opening presentations by Dr. Rosen of Rutgers University on sample analysis and my own short outline of the analytical framework involved, Professor Messelson of Harvard presented his hypothesis and supporting evidence that the presence of mycotoxins in physical and biological samples was due to natural occurrence, not chemical warfare. Most of the work of the conference focused on the US evidence of Vietnamese use of toxins in Southeast Asia, with almost no attention paid to the evidence from Afghanistan. Study groups reported on their findings at the final session. The following general conclusions were reached, although many questions, including Professor Messelson's hypothesis, went unanswered and were not debated:

--Some type of chemical weapons have been used in Southeast Asia, but it is not clear that toxins have been used.

--People have been killed or made ill, but the US evidence that Vietnamese use of toxins is the cause is not conclusive.

State Dept. review completed

--The US government has made the CW use issue a major foreign policy initiative, but the resources devoted to collection and analysis are minimal. More systematic interviews by qualified interrogators and physicians are needed in Thailand and Pakistan, and a new program is needed to investigate the Eritrean charges of Ethiopian use of chemical weapons.

--Samples, physical and biological, need to be analyzed in additional laboratories in the US and other countries.

--The Soviet explanations for the presence of mycotoxins in Southeast Asia are scientifically unsound and the Vietnamese claims about the damage done by Agent Orange to humans and vegetation are equally unfounded.

--A low percentage of the samples collected by the US contain toxin and other countries have not been able to confirm the US analysis. More control samples are needed to establish base line data on the natural occurrence of mycotoxins in tropical climates.

--There was a difference of opinion over the effectiveness of trichothecene toxins as chemical warfare agents. The Norwegian scientist, Fonnum, presented a case for their effectiveness.

--A number of participants, in particular Markovich from France, suggested that WHO, ICRC, and the UN should be requested assist in conducting epidemiological studies. Egyptian General Ezz and others pointed out that these organizations had not been willing to participate in any manner.

Discussion: This was a very well organized conference with the majority of the participants objectively interested in learning more about the US evidence. Unfortunately, Dr. Mirocha could not attend and there was no presentation of the US scientific and technical evidence. There was a useful exchange of information from the variety of experts present, but overall that exchange raised more questions than answers.

In no way did Professor Messelson succeed in orchestrating this conference in order to gain acceptability for his views. It has become more clear in the past few months that Messelson is working in a very systematic manner to discredit every facet of the US case. Although he stated that he has always believed some type of chemical warfare was going on in these countries, he has privately told his numerous cronies that only riot control agents are being used. Messelson had been in contact with everyone I talked to at the conference. He claims to be playing the devil's advocate in order to bring about more rigorous scientific investigations, but his hypotheses has been widely spread in this country and in Europe, causing damage to the US position. For example, Markovich (Messelson) told the French government that the leading US expert on CW had uncovered new evidence that disproved the US statements on toxin use. In part, this has lead the French government to move slowly on releasing their evidence. His latest effort is to attack the credibility of Dr. Zikria of Colombia Medical Center who examined victims in Pakistan. At the conference, he indirectly questioned Dr. Mirocha's techniques by saying that Dr. Rosen appeared to have a better method of analysis.

The Chairman of the conference intends to distribute a transcript to all participants and invited everyone to provide comments, changes and any additional papers they felt would be useful. This gives the US government an opportunity to respond to unanswered questions or send papers to the participants. The conference was closed to the media, but we can expect various distorted versions of what took place to surface in the media and elsewhere. Messelson's final remark was that he was now more convinced that his hypothesis might be valid. Julian Perry Robinson from Sussex University, a long time associate of Messelson's, helped prepare<sup>the</sup> "evidence" for Messelson's presentation. Markovich can be expected to report his version of the conference to the French government.

The statements of the Thai researcher, Dr. Samaniya, were used by Messelson to support his hypothesis that the occurrence of yellow spots on leaves is a natural phenomena. She stated that she had found yellow spots on leaves collected in Bangkok and had only found pollen in samples collected from the February 19 attack on a Thai village. Our interview with Samaniya in Washington revealed a much different story than what was apparent at the conference.

Dr. Sarver from the US Army Chemical Systems Lab and I, with the help of Amos Townsend, Dr. Bernard Wagner, Dr. Rosen, Peter Ashton, the Canadians Lt Col Humphries and Dr. Schiefer, the Norwegian Dr. Fonnum and several of the anthropologists, were able to clear up a number of confusing issues and counter some of Messelson's weak points. Informal discussions indicated that the majority of the participants are convinced by the US evidence, but they believe we have not made a persuasive public case and have not provided the scientific community the background information to make a judgement.